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laundry equipment

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1. INTRODUCTION

This manual refers to industrial tumble dryers installation, use and maintenance.
It is written in compliance with the European Community rules in force. The information here written are addressed to the installer and the user, who must be sure to fully understand them before to use the machine.
This manual must always be available for consultancy. In case it should be lost or damaged, ask for a new copy to the manufacturer.
The producer is not responsible for any consequence coming from a wrong dryer use because of a not complete or missing reading of this manual.
The manufacturer reserves itself the right to modify the specifications written in this manual or the characteristics of each machine. Some picture of this manual may differ from reality because of some detail. Diagram and technical data may be changed without any previous notice.
Manual and its attachments are parts of the machine themselves, so they must be kept together with the machine and follow the machine when it is sold to another user.
Attachments and exploded view with spare parts list can be retrieved in the technical area of the producer website.
Dryer serial number must be available when entering in the web site.

ATTENTION!

Manufacturer is not responsible for any possible wrong information here written, when this errors are due to a printing or translation error.
The manufacturer reserves himself the right to modify the product, when necessary or useful, without changing the main characteristics. Without any previous authorisation of the manufacturer, to copy completely or partially the text and the pictures of this manual is forbidden.

2. SAFETY RULES

Not respecting the following instruction, may cause damages to people, things and animals.

Installation and maintenance of the here described machines must be trained by authorised personnel, which knows the product and respecting the European Rules in matter of industrial machines installation.
Reparation made in a not correct way may seriously compromise the user safety.

Instruction must be read with high attention before to make the machine work. Instruction must be available to all the people working with the dryer.

Here described tumble dryers must be used to professionally drying clothes and linen: any other use is forbidden, if not before authorized by the manufacturer.

Before to take out the linen from the dryer, be sure that the drum is stopped. Never pull your hands inside the drum, if it is still rotating.

Do not dry in the machine any other different object; do not dry linen, which entered in contact with dangerous stuff like explosives, detonating explosives or inflammables. Linen entered in contact with this substances, need to be rinsed or aired before to be dried.

Do not dry linen which has been soaked in substances dangerous for the operator health, like poison or cancerogenic stuff.

To avoid risks of fire or explosion, do not approach to the machine with combustible or inflammable substances.

Always stick to the drying instruction written on linen label.

The use of this machine is forbidden to people under 16 years of age.

External supplementary connection to the machine release the manufacturer from any responsibility if they are not properly done.

IMPORTANT NOTES

Working with opened sides is forbidden!

In order to avoid burnings or accident it is forbidden to remove, even temporarily, the protection panels and the safety systems!

It is forbidden to introduce bars, sticks or metallic objects inside the drum.
In case of emergency, please follow always the here described procedures.

Each time the dryer is starter, check always the safety device correct working!

To know the machine and its safety device working is compulsory!

BURNS DANGERS

The dryers, because of its nature, presents a burns danger.
Burns may be caused by:

- **The contact with the linen taken out from the dryer;**
- **The contact with the door inside, following its opening;**
- **The contact with the heating batteries during the maintenance;**
- **The contact with the fluxing steam parts.**

On the machines are fixed the following label, if one of them should be damaged, the user must replace it with a new identical one.

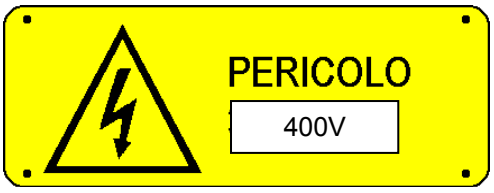
Stuck near dried linen exit.

Dryer must always be used by trained personnel and with at least one other operator in the room!

READ CAREFULLY THE INSTRUCTION FOR OPERATING IN CASE OF BLACK OUT, AND INFORM ALL THE USER ABOUT THEM.

ELECTROCUTION DANGER

Any service on the electrical parts must by operated only by qualified personnel. Before to work on the machine, cut off the electrical supply.
Power and controlled circuits can be modified only by manufacturer personnel, on the contrary the warranty condition empire.
On the electric board, the here below warning label was stuck. If this label should be damaged or unstuck, it needs to be replaced by an identical one.



OPERATOR PSYCHO-PHYSICAL CONDITIONS

The dryer user must be in perfect psycho-physical condition; during the working cycle, the user must always assume a vertical posture in front of the machine.
Suddenly or not controlled movement must be avoided because of the risks of dangerous knocks against the dryer chassis, i.e.: during the dryer unloading.
The other people in the laundry room do not have to distract the operator, who is working on the dryer.
While working, the operator do not have to be distracted by TV, radio or any source of distraction.

LIGHTING

In the room where the machine is installed, the lighting must be at least of 300-500 lux intensity; unpleasant flashing must be avoided.

ATTENTION!

These instructions do not cover all possible risks. User must always pay high attention and respect carefully the rules.

3. MANUFACTURER RESPONSABILITY

The instructions written in this manual are not replacing, but completing the duties deriving from the safety and accident prevention laws.
With reference to what is written in this manual, the manufacture is not responsible for:

- a use of the machine against the safety and accident prevention laws in force.
- not correct machine installation.
- missing of periodical and programmed maintenance.
- not observance, or not correct observance, of this manual instructions.
- electrical supply fault.
- not authorized modification of the machine.
- use of the machine by not authorized personnel.

4. UNPACKING

The machine must be controlled at the delivery moment, any external or inside damage dues to the transport, must be reported immediately to the forwarder.

ATTENTION!

Moving the machine, remember that the dryer centre of gravity is located in the last third of the machine height.
Machine must be completely unpacked next to the installation place. Straps must be cut and the covering packing material must be taken off.
Packing materials must be wasted following the rules in subject of environment protection.
Using a key, take away the nuts on the machine base which are fixing the dryer to the pallet (frontal and back).

ATTENTION!

Check the machine net and gross weight on the technical data sheet sent with the machine: it must comply with the available lifting means.

ATTENTION!

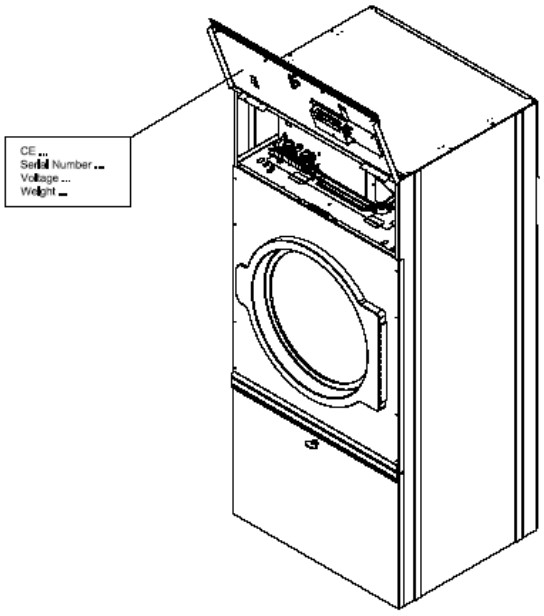
Pallet cannot be used as normal dryer support! The machine must always be installed without the pallet and positioned as described in the relative paragraph.

ATTENTION!

The machine can be moved only when it is fixed on its pallet: the machine handling must be done only by trained and competent personnel.

5. MACHINE IDENTIFICATION

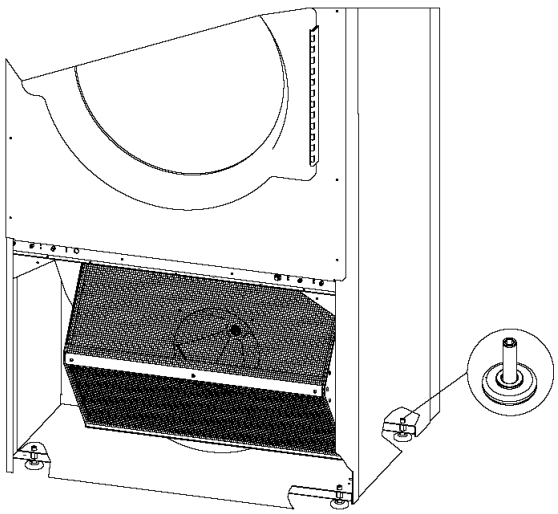
Each dryer can be identified by the sticker with reporting the dryer serial number, model, power and technical characteristics.
Be sure that the exiting supply systems (electric, hydraulic, steam, gas, compressed air) are complying with the data written on this sticker.
Spare parts and service can be supplied only if the dryer, to which they are addressed, is correctly identified.



If the sticker is damaged or partially/completelly missing, the dryer cannot be correctly identified, so that any installation or maintenance job can be difficult. In the above case the warranty automatically and immediately expires.

6. INSTALLATION AND POSITIONING

Installation must be trained by qualified personnel.
Machine must be positioned on a plane surface horizontally and in a stable way using the adjustable feet at the dryer base.
Feet can be adjusted from outside, screwing and unscrewing them until the dryer is correctly positioned.
In models where it is provided, the feet can be adjusted from inside using a 5mm hexagonal key after the filter door and the back panel have been opened



Always check if the floor can bear the machine weight written in the technical data sheet.
The machine load can be considered completely static. To calculate the dryer static load, remember to add the weight of the wet linen introduced in the dryer to the dryer net weight.
Remember to leave at least 500mm around the machine to grant a correct dryer use, working and maintenance.
The room temperature must be between +5°C and +40°C.
The room where the machine is installed, must have enough air change. Please note that the machine take air from the room where it is installed and that the humid air coming from the drying cycle must be exhaust outside.

ATTENTION!

Clean air must be assured to the machine; air combined with chlorine, fluorine or other solvent vapours must be avoided.

Do not use or stock near the machine benzene, petroleum or other inflammable stuffs. On the contrary fire or explosion may be caused.

Keep near the machine a foam extinguisher which is periodically controlled in compliance with the rules in force.

7. INSTALLATION: GAS HEATED DRYERS

Each gas heated machine must be considered, independently from the capacity, a gas equipment.
During the installation, the following rules must be respected:

- territorially building and fire-prevention rules;
- accident prevention rules;
- CENELEC rules (electric system);
- Rules about the combustible gas use
- Rules about gas system supplied by public net or GPL gas
- Rules coming from the gas company
- Rules coming form the electricity company
- Other possible local rules.

Room air inlet and ventilation opening can be closed only if the closing condition is controlled and if the gas equipment is allowed to work only when they are opened.
The room is correctly aired, also in case of the exhaust gas are mechanically sucked, when the nominal thermal pollution of this gas equipment do not cause depression in the room.
In this way a regular gas combustion and the complete exhaust of the burn gas are guaranteed.
To dimension the air grating, please refer to the data written on the machine technical sheet and to the rules in force.

In case a liquid gas heated dryer should be installed below the ground level, adequate device for a forced ventilation must be provided.

ATTENTION!

Never installed a gas heated machine in the same room where machine using solvents are installed (example: dry cleaning machine) .
This combination could produce dangerous substances for the operator and it can cause steel corrosion.
If a gas heated machine and a machine using solvents are installed in two separate room, be sure that there is no possibility of air exchange between the two rooms.

ATTENTION!

In case of machine equipped with a tilting system, the machine must be fixed to the floor using some screw anchor.

Machine must be installed perfectly horizontally on a floor without elastic reaction.

ATTENTION!

In case of titling machines, there are external parts which moves during the linen loading and unloading steps.
For machine dimensions and machine needed space during the movement, please refer to the technical data sheet.

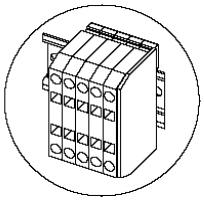
8. INFORMATION ABOUT MACHINE NOISE.

The air noise produced by the machine is producing an A continuous and weighted acoustic pressure lower then 70 dB.
In case that more machine should be mounted in line, the sums of the acoustic pressure are:
2 machines: air noise < 73dB
3 machines: air noise < 75dB
4 machines: air noise < 76dB
5 machines: air noise < 77dB

9. ELECTRIC CONNECTION

Electric connection must be carried out by qualified technicians and must comply with local and national rules in force.
To connect the machine use a H05 VV – F cable or superior, it must be correctly dimensioned following the data label.
Install before the machine a omnipolar disconnecting device (i.e.: a circuit breaker) which need to have a contact opening that allows the complete disconnection in case one of the conditions of the over tension III category is

verified. This device must comply with the subject regulation in force.
Check the main switch, it must be in position “0”.
Open the electric supply door.
Pass the electric supply cable through the cable holder supplied with the machine. The cable must be correctly dimensioned (check the following table).
Il collegamento dei cavi di alimentazione elettrica deve essere eseguito sul sezionatore di bordo macchina.
Be sure the main switch is in position “0”.
Open the electric supply back door. The cable, which need to have the adequate dimension (see the following tables), must pass through the cable holder supplied with the machine.
Electric supply cable connection must be done on a marked series of terminal.



Following the kind of heating, which is indicated on the serial number plate, connect the cable to the terminals, as indicated:

⏚: ground, colour: yellow/green

L1, L2, L3: phase, colour: brown

N: neutral, colour: blue

In case of installation or replacement of the supplying cable, the ground cable must be at least 5cm longer.

ATTENTION!
Check the fan rotation direction: it must rotate in the direction which allows the exhaust air discharge; it means that the fan motor must rotated in the direction indicated by the arrow marked on the motor cover.
Check that the phases are connected in the correct sequence.

The machine must be connected to an efficient ground system: the supplier is not responsible in case this connection is not operated in compliance with the subject rules in force.
Before to do any maintenance cut the electricity supply to the machine: for maintenance refer to the machine electric diagram, which is inside the machine; anyway, it can be retrieved in any moment in the manufacturer web site.

The minimum section for the electric cable are indicated in the below table (expressed in mm^2)

SIZE	1ph 208V-240V	3ph 208V-240V	3ph 380V-440V
10	25	10	10
14	25	10	10
18	25	16	10
23	25	16	10
34	35	25	16
55	no	35	25
75	no	50	35

Electric heating

SIZE	1ph 208V-240V	3ph 208V-240V	3ph 380V-440V
10	2,5	2,5	2,5
14	2,5	2,5	2,5
18	2,5	2,5	2,5
23	2,5	2,5	2,5
34	2,5	2,5	2,5
55	4	2,5	2,5
75	4	2,5	2,5

Steam or gas heating

ATTENTION!
The above minimum sections written above, can change following the connection cable length. For a cable long more then 5mt, increase proportionally the section in function of the added length.

ATTENTION!
The machine connection must always be made respecting the data written in the serial number plate (power, supply tension, frequency).
For voltage different from the one provided, ask for more information to the manufacturer.

ATTENTION!

For machine equipped with drum or fan speed control, it means for machine equipped with inverter, a protection by RCD kind B device must be provided (sensible to the current medium value).

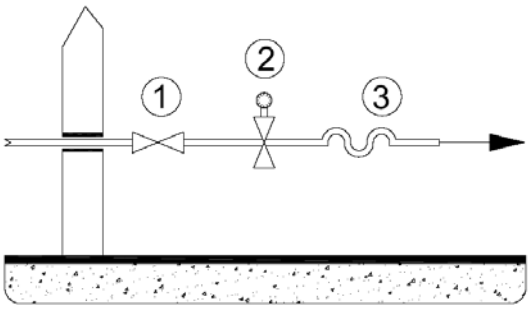
10. GAS CONNECTION

If the machine is gas heated, the necessary connection with distribution system must be made: check the machine serial number plate data, especially supply gas pressure.

ATTENTION!

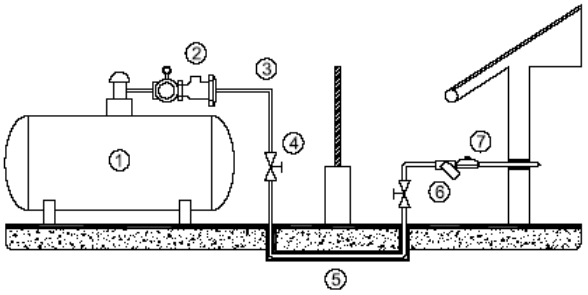
The gas steam maximum pressure admitted is 50mbar. To supply the gas with an higher pressure, even for short time, may damage the valve.

The gas distribution system must be realised in compliance with the rules in force and respecting the section size and the pressure suitable for the equipment (control the table in the next pages).
Look to the following picture: before the machine must be installed a rapid gas interceptor cock (1); the gas cock must be near the dryer and in a easily reachable position. The cock must respect the rules in force and must be a type approved.
A low point pressure switch must be provided.
The connection to the gas system must be made using a no-vibration joint (3); if flexible tubes are used, these must be in stainless steel DIN 3384 or DIN 3383.



The gas system must be realised in compliance with the rules in force. The dryer gas connection has a dimension, which is written in the technical data sheet; this dimension do no must be reduced.

The next picture shows how the machine should be connected in case of gas cylinder with high pressure: in this case a two steps reduction system is necessary; it must be realised in compliance with the rules in force.
Below the picture, a description of this system concept.



A first 1.5mbar governor must be connected after the high pressure gas cylinder (1), after that a safety valve with the appropriate dimension must be installed (2).
The high pressure tube (3) is interrupted by an interceptor cock (4) and then it follows protected (5) below the compartments division area border.
Before to enter in the room where the machine is installed, a second interceptor valve must be provided and then a filter (6) and a second governor (7) which brings the pressure to the correct working value.

11. GAS CONNECTION: TIGHTNESS TEST

All the joints between system and dryer must be tightness tested .
To make this test, it is suggested to use a leak finder spray; otherwise the joints can be covered with a foamy substances, which must not be corrosive. In both cases, bubbles must not be created.

ATTENTION!

It is forbidden to use free flame for the tightness test!

12. GAS CONNECTION: THERMAL POWER

Each dryer tested in the factory is prepared for the kind of gas which is written in the sticker near the serial number plate.
If the machine is predisposed for a gas which does not correspond to the kind available in the installation place, then it is compulsory to make the dryer adaptation. In this case, the authorised after sales centre must be informed.
The dryer working with the expected thermal power depend on the inlet pressure and the gas calorific power, but also depend on the nozzle, the gas pressure arriving to the nozzle and from a correct supply of primary air.
The below tables are showing between which values must be the inlet gas pressure to allow the machine working
If the gas pressure does not correspond to the value written below, it is forbidden to start the dryer.

If it is verified a gas pressure different from the table value, it is suggested to contact the gas company or the company which realised the gas system.
The GAS Lower Calorific Power must be asked to the gas company and must correspond to the one indicated in the following tables.

I, UK, IE, ES
Kind B22, II2H3+ CE 0085-AT0341
Flue max pressure: 150Pa

NATURAL GAS 2H (G20); PCI=34,02MJ/Nm^3
P_n=2000Pa
P_{max}=2500Pa; P_{min}=1700Pa

Dryer cap.ty	Nozzles [nr]	Nozzle Ø [mm]	Consume m^3/h
10	2	2,90	3,0
14	2	2,90	3,4
18	2	2,90	3,8
23	3	2,70	4,0
34	4	2,70	5,3
55	4	4,05	8,0
75	4	5,00	11,0

LIQUID GAS 3+ (G30); PCI=45,65MJ/kg
P_n=2800-3000/3700Pa
P_{max}=3500/4500Pa; P_{min}=2000/2500Pa

Dryer cap.ty	Nozzles [nr]	Nozzle Ø [mm]	Consume Kg/h
10	2	1,85	2,3
14	2	1,85	2,6
18	2	1,85	2,9
23	3	1,75	3,0
34	4	1,75	4,0
55	4	2,35	6,0
75	4	2,75	9,0

AT, CH
Kind B22, II2H3+ CE 0085-AT0341
Flue max pressure: 150Pa

NATURAL GAS 2H (G20); PCI=34,02MJ/Nm^3
P_n=2000Pa
P_{max}=2500Pa; P_{min}=1700Pa

Dryer cap.ty	Nozzles [nr]	Nozzles Ø [mm]	Consume m^3/h
10	2	2,90	3,0
14	2	2,90	3,4
18	2	2,90	3,8
23	3	2,70	4,0
34	4	2,70	5,3
55	4	4,05	8,0
75	4	5,00	11,0

LIQUID GAS 3B/P (G30); PCI=45,65MJ/kg
P_n=2800-3000/3700Pa
P_{max}=3500/4500Pa; P_{min}=2000/2500Pa

Dryer cap.ty	Nozzles [nr]	Ø Nozzles [mm]	Consume kg/h
10	2	1,85	2,3
14	2	1,85	2,6
18	2	1,85	2,9
23	3	1,75	3,0
34	4	1,75	4,0
55	4	2,35	6,0
75	4	2,75	9,0

F
Kind B22, IIE+3+ CE 0085-AT0341
Flue max pressure: 150Pa

NATURAL GAS 2E+ (G20); PCI=34,02MJ/Nm^3
P_n=2000Pa
P_{max}=2500Pa; P_{min}=1700Pa

Dryer cap.ty	Nozzles [nr]	Ø Nozzles [mm]	Consume m^3/h
10	2	2,90	3,0
14	2	2,90	3,4
18	2	2,90	3,8
23	3	2,70	4,0
34	4	2,70	5,3
55	4	4,05	8,0
75	4	5,00	11,0

LIQUID GAS 3+ (G30); PCI=45,65MJ/kg
P_n=2800-3000/3700Pa
P_{max}=3500/4500Pa; P_{min}=2000/2500Pa

Dryer cap.ty	Nozzles [nr]	Ø Nozzles [mm]	Consume kg/h
10	2	1,85	2,3
14	2	1,85	2,6
18	2	1,85	2,9
23	3	1,75	3,0
34	4	1,75	4,0
55	4	2,35	6,0
75	4	2,75	9,0

DE
Kind B22, II2ELL3B/P CE 0085-AT0341
Flue max pressure: 150Pa

NATURAL GAS 2ELL (G20); PCI=34,02MJ/Nm^3
P_n=2000Pa
P_{max}=2500Pa; P_{min}=1700Pa

Dryer cap.ty	Nozzles [nr]	Ø Nozzles [mm]	Consume m^3/h
10	2	2,90	3,0
14	2	2,90	3,4
18	2	2,90	3,8
23	3	2,70	4,0
34	4	2,70	5,3
55	4	4,05	8,0

Dryer cap.ty	Nozzles [nr]	Ø Nozzles [mm]	Consume m^3/h
75	4	5,00	11,0

NATURAL GAS 2ELL (G25); PCI=29,30MJ/Nm^3
P_n=1800Pa
P_{max}=2500Pa; P_{min}=2000Pa

Dryer cap.ty	Nozzles [nr]	Ø Nozzles [mm]	Consume m^3/h
10	2	3,20	3,5
14	2	3,20	3,7
18	2	3,20	3,9
23	3	3,00	4,7
34	4	3,00	6,2
55	4	4,50	9,2
75	4	5,50	12,1

LIQUID GAS 3B/P (G30); PCI=45,65MJ/kg
P_n=2800-3000/3700Pa
P_{max}=3500/4500Pa; P_{min}=2000/2500Pa

Dryer cap.ty	Nozzles [nr]	Ø Nozzles [mm]	Consume kg/h
10	2	1,65	2,3
14	2	1,65	2,6
18	2	1,65	2,9
23	3	1,50	3,0
34	4	1,50	4,0
55	4	2,35	6,0
75	4	2,75	9,0

13. GAS CONNECTION: GAS INLET PRESSURE CONTROL

The inlet gas pressure must be controlled using a digital or liquid measure tool. (precision: at list 0.1 mbar).

- Close the interceptor device.
- Open the sealing screw of the gas valve pressure tube connection indicated with “Pin”.
- Connect the manometer.
- Open the interceptor device.
- Start the dryer following the user instruction
- Check the inlet pressure, with the burner working.
- Switch off the dryer.
- Close the interceptor device.
- Take off the monometer.
- Close the screw of the gas valve pressure tube and control the tightness.
- Open the interceptor device and control test the tightness.

The dryer must not working if the gas pressure is out of the limit shown in the previous tables.

14. GAS CONNECTION: FINAL TEST

Once the connection works are taken over, the equipment and the installation must be controlled.

It is necessary to control:

- that the connection are made respecting the instructions written in this manual;
- that the safety rules and the laws about this subject are respected;
- that gas connection are tightness tested.

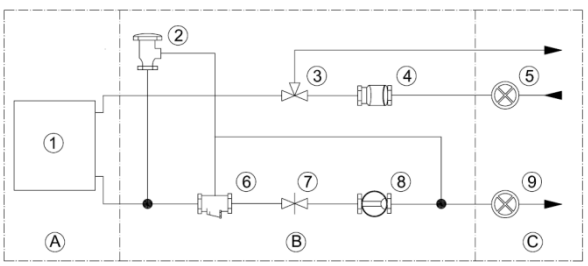
Switch on the machine following the user manual instructions controlling the burner lighting on and the flame aspect.
Do a gas test with the volumetric method. Using the gas contactor, control how much gas was used in a fixed time unit: this value must be compared with the values in the tables.

15. HUMID AIR AND BURN GAS EXAUST

The humid air and burn gas exhaust system must be realized following the rules in force.
To avoid lack of humid air and noise, the exhaust joints to the outside must be made tight with high temperature resistant material (filler, putty, silicone preparation.
Gas heated tumble dryer are B22 equipment, it means they are gas equipment which depend on a aired room without any wind protection device with blower behind the burning room.
Dryer burned gas must be brought outside through a chimney.
Burn gas and humid air pipe must be the shortest possible one and it must be rising to the exhaust chimney.
In the lowest point a condenser drain must be provided, this drain derivation must observe the local rules in subject of water drain connection.
The dryer is equipped with a suction fan which produces its typical noise while working.
To reduce the noise level, a muffler can be installed on the drain (it can be found in specialised shop).

16. STEAM CONNECTION

Only for steam heated tumble dryers, a connection to the steam system must be provided.
This connection must be performed by qualified personnel in compliance with the national and local rules in force.
Steam must satisfy the minimum requirement which are written in the technical data sheet; all system parts must be certified.
The steam system must be realised following the below diagram:



System elements are indentified as written here below:
1) dryer heat exchanger
2) water / air trap
3) safety valve

ATTENTION!
In order to be efficient, the safety valve must be of a adeguate size to provide to the maximum steam system rate.

4) filter
5) steam inlet gate valve
6) steam trap
7) check valve
8) passage indicator
9) condenses outlet gate valve

A) Inside dryer
B) Outside dryer
C) Steam supplying system

ATTENTION!
Drying productivity depend on the steam heat exchanger efficiency.
Dryer can work with a steam pressure between 0,5 bar to 12 bar, but lower is steam pressure, lower is the machine productivity. To avoid longer drying time, it is suggested to work with a minimum pressure of 5 bar is suggested.

17. COMPRESSED AIR CONNECTION

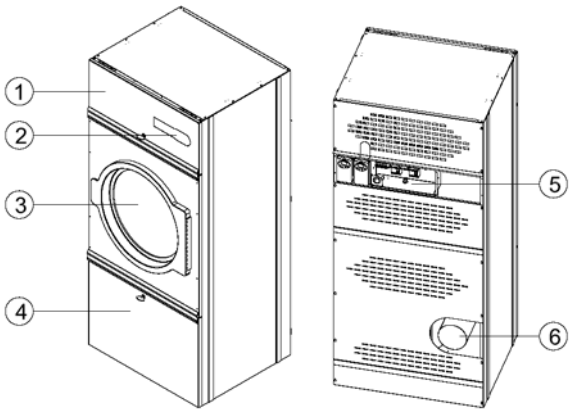
Connection to a compressed air system is necessary for some dryer models: check your equipment data sheet.
System must be performed by qualified personnel in compliance with national and local rules in force. Check if the circuit compressed air respect the following characteristics:

Minimum pressure: 6 bar
Maximum rate: litters/h (in case of air compressor dedicated to the machine, a minimum tank of 50 litters is suggested).

Connection between system and dryer must be tight tested; it is suggested to use a leak finder spray. In case of air leaks, stop them.

18. TO USE THE DRYER

Dryer is characterised by some elements which must be know since the beginning.



The point nr 1 identifies the heating coil door. In case of maintenance, this small door can be open using the plastic key given together with the dryer documents. Access to the electric board must be allowed only to specialised and qualified personnel.
The point nr 2 identifies the control area, control can be made by a microprocessor or a mechanical dual timer.
The point nr 3 identifies the dryer loading door.
The point nr 4 identifies the filter door. It must be open each time the filter needs to be cleaned. Access to the filter must be allowed only to specialised and qualified personnel.
The point nr 5 identifies the electric connection board and part of the electric system.
The point nr 6 identifies the humid air exhaust (always) and burn gas exhaust (in case of gas heated dryers).

ATTENTION!
Air inlet on the dryer back must always stay opened. Air inlet must not be avoided in any way.

19. PREPARE THE LINEN

Dryer must be loaded on the base of the data written on the serial number plate: the dryer must not be loaded with a weight above the nominal load written on the serial number plate.
Before to decide the most adequate program, divided the linen into groups, which should be homogeneous for kind of fabrics or fibres, in order to reach a uniform drying inside the drum.
Avoid to load dripping linen: clothes must be spin before. Always be sure that batcher or other object are not among the linen.
Before to load the dryer, always control that linen sticker is allowing the tumble drying (and that the linen has been water treated); always stick to linen manufacturer indication.

Here below the meaning of the most important international symbols:

Drying to a normal temperature

Drying to low temperature

Do not tumble dry

ATTENTION!

Following linen must not be dried in order to avoid fire:

- Linen treated with inflammable stain remover;
- Linen with inflammable substances residuals: oils, greases, benzene, alcohol, etc.
- Linen with rubber parts;
- Linen with damaged quilting;
- Line with self-fire fabrics;

20. PROGRAM START

Switch on the main switch to supply electricity to the machine.
In case of steam heated machines open the gate valve to let the steam enter. To limit water hammering, open the gate valve slowly: from closed to open position in one minute time.
In case of gas heated machine open the gas interceptor valve.

Be sure that the emergency stop button (on the model equipped with this option) is in the correct position, that it has not been activated during last working cycle or during the transport.
Before to start the machine, safety devices need always to be tested (see the corresponding paragraph).
When the machine is starter, software release date and version are displayed.

vers. 0.27
03/03/10

After that the display shows:

DOOR OPEN

While the door is open, the above massage is displayed by turns with the date and the time.

08:55
Saturday 06 March 10

The dryer is ready to be loaded. Before to introduce the wet linen inside the drum, be sure that the drum is completely empty.
The machine must be load with the most possible homogeneous linen; loading weight must not be above the one indicated in the technical data sheet and in the serial number plate.
Once the dryer is loaded, close the door.

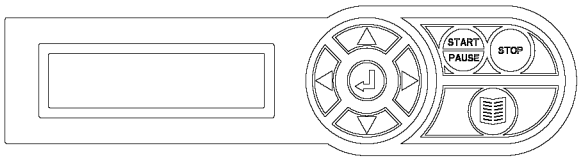
ATTENTION!

Closing the door, be sure that pieces of linen do not stay closed between the door and the dryer front panel.

When the door is completely closed, the display shows:

SELECT A PROGRAM

To select a program, scroll down the programs list using the following keys:



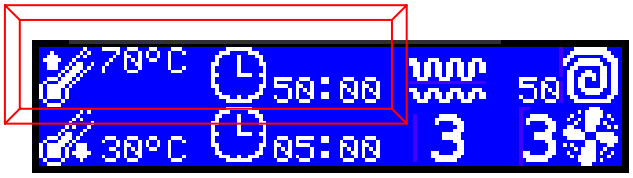
- to scroll ahead: ► or ▲
- to scroll back: ◄ or ▼

When a program is visualised, its name and its position in the list are displayed (the name can be modified: see the apposite paragraph). Example:

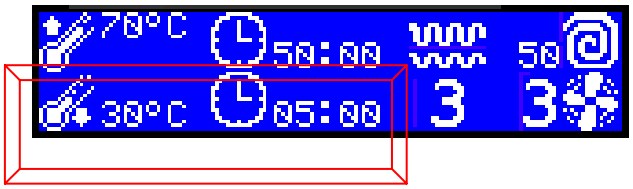
70°C 50'

PROGRAM 03

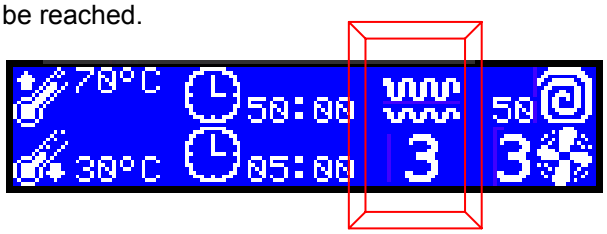
The characteristic of the program can be verified before to start the cycle; in effect, after few seconds the display will show the drying parameters.
Program parameters visualisation may be anticipated or deleted using the ENTER ◄┘ Key.
Here below the parameters description:



The parameters shown above on the left are the drying cycle temperature and length. In our example the cycle will reach a maximum temperature of 70°C and will be 50 minutes long.



The parameters shown below on the left are the cooling temperature and length. The machine will end the cycle when one of this two set point will be reached.

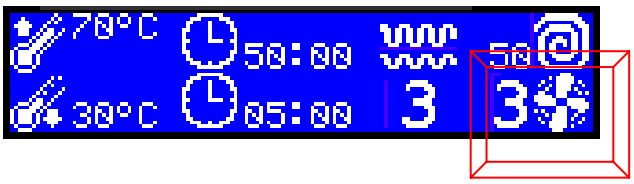


The here above highlighted parameter refers to the electrical heating power (only on the dryers equipped with this option).
The power levels are three:

- level 1: minimum power
- level 2: medium power
- level 3: maximum power

The power level must be chosen following the fabrics to be dried. Higher is the selected level, quicker will be the temperature rise inside the drum.

The parameter above on the right shows the drum speed (only on the dryer equipped with drum speed control option).



The parameter below on the right shows the fan speed (only on the dryer equipped with fan speed control option).

Suction fan speed level are four:

- level 1: very low speed
- level 2: low speed
- level 3: medium speed
- level 4: high speed

Selection of suction fan speed is li correlated to the air speed inside the drum: higher is the selected level, higher will be the speed of the air passing through the drum.

Once the wished program is displayed, press the key START/PAUSE.

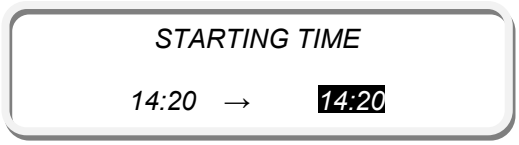
ATTENTION!
Selected program must assure a residual humidity of 10-20% in the linen to grant a perfect finishing.

ATTENTION!
In case of damages or working anomalies, shut off the dryer and call the authorized service centre.

21. PROGRAM DELAYED START

To select the program follow the instructions given in the previous paragraph, but instead to press START/PAUSE, press the key MENU:

The display shows:



The time on the left is the current one, on the right the starting time is flashing.
The start can be delayed at maximum for 24 hours.
Use the keys ▼ and ▲ to fix the wished starting time and press ENTER ◄┘ or START.

The display shows:

Below the name of the program a count down shows how many hours, minutes and seconds are missing to the automatic delayed start.
The count down can be stopped in any time pressing the key STOP or MENU.
Once the count down is ended the cycle will be automatically started.
If the door is opened during the count down, the machine stays in pause (see the appropriate paragraph).

22. PROGRAM PAUSE

While the program is running, it can be temporary or definitely interrupted.
Pressing the key START/PAUSE the program is temporary interrupted.

The display shows:

If the door is opened, the display shows:

The pause is stopped when the door is closed again and the key START/PAUSE is pressed. The program will start from the point where it was interrupted.

ATTENTION!
When the door is open during a dryer pause, please remember that the linen temperature could be very high!

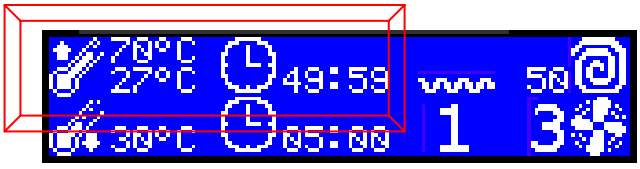
23. PROGRAM STOP

The program can be definitely interrupted in each moment, just pressing the STOP key:

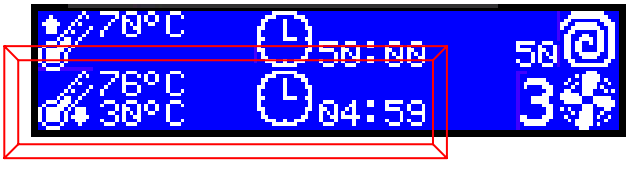
ATTENTION!
In case of anticipated stop of the cycle, the linen temperature could be very high!

24. PROGRAM STEPS

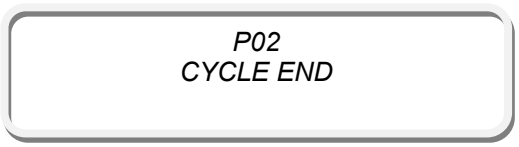
The drying program is made up of two steps: heating and cooling.
Each one of these two steps has two characteristic value: temperature and time.
During the heating step he machine is drying for a certain time at the fixed temperature.
During the cooling time, the machine cools the linen for the fixed time or up to arrived to the fixed temperature: the step will finished when one of the two parameters will be reached.
While the program is running, it is possible to check all the fixed parameters.
During the heating step, the set point temperature is always highlighted (in our example: 70°C): the real drum temperature is flashing below on the right (in our example: 27°C).
On the right it is indicated the time remaining to the end of the heating step (in our example: 49' and 59").



In the cooling step the set point temperature is always indicated (in our example: 30°C): the real drum temperature is flashing above it (in the example: 76°C).
On the right it is indicated the time remaining to the end of cooling step (in our example: 4' and 59").



When the cycle is completed, a buzzer beeps for 10 seconds. The display shows:



The name of the program just ended is displayed (in the example: the program nr 2). The message stay displayed until the STOP key is pressed or until the door is opened.
In case the STOP key is not pressed or the door is not open, if the no wrinkle function is on (look to the relative paragraph), the drum will start to turn again following the set value.
No wrinkle step can be interrupted pressing the STOP key or opening the door. Anyway this step will stop at the programmed time or at the end of the programmed length.

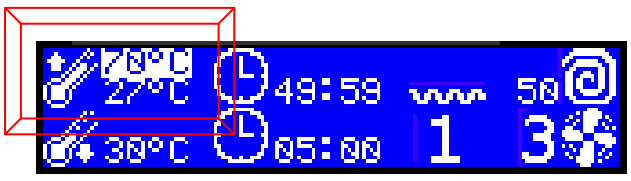
The waiting time before the no wrinkle step start is displayed on the left. The no wrinkle step length is displayed on the right, this value will become a count down as soon as the step will start.
A previous drying step can be added at the cycle beginning if a INITIAL COOLING is programmed.

25. END OF A WORKING DAY

At the end of the working day, the dryer must be brougth to the end of the cycle and switched off: the drum must be emptied and cleaned.
Close all the energy supply to the dryer using the appropriate line switches: electricity, gas, steam and compressed air.
The dryer door must be left open.

26. MODIFICATION OF THE PARAMETER DURING THE CYCLE

While the program is running, the parameters can be modified: this changes are not kept in the program memory.
To modify a program while it is running, press the key MENU or the key ENTER ◄┘.
The display shows:



The temperature set point is highlighted with a with background.
Each time that a parameter is highlighted in this way, its value can be increased or decreased with the key ▲ and ▼.
All the displayed parameter can be modified: to move from on parameter to another one use the keys ◄ and ►.

Once all the necessary changes are made wait for a while: after few seconds the visualisation of the parameters will come back to the usual way.
User can make as many changes as he wants, at any time and in any cycle step.

ATTENTION!
Program modification must be operated only by trained personnel.

27. MANUAL WORKING

Cycle can be also manual; after the load, the user can decide to set the value of the main drying parameters.
To execute this program, press once the key ▲ or ► while the display is showing “SELECT A PROGRAM”.
The display shows:

Press the key ENTER or START.
The display shows:

Using the keys ▲ and ▼, the drying time can be increased or decreased up to the wished value.
Once the wished time is visualised, press START or ENTER.
The display shows:

Using the keys ▲ and ▼, the drying temperature can be increased or decreased up to the wished value.
Once the wished temperature is visualised, press ENTER and than start or directly START.
The manual cycle start.
The set value stay in memory as default value for the next use of a manual cycle.
As explained for the programs value, also in this case parameters can be changed during the drying cycle (see the previous paragraph).

28. PROGRAMS DESCRIPTION

The machine microprocessor can store up to 30 programs, which are already compiled by the manufacturer.
The table below summarise their characteristic.
The default programs can be modified, look for the instruction to the apposite paragraph.

	DRYING		COOLING	
PROG.	**°C**	**Min.**	**°C**	**Min.**
01	90	50	40	3
02	80	50	40	3
03	70	50	40	3
04	60	50	40	3
05	50	50	40	3
06	40	50	40	3
07	90	40	40	3
08	80	40	40	3
09	70	40	40	3
10	60	40	40	3
11	50	40	40	3
12	40	40	40	3
13	90	30	40	3
14	80	30	40	3
15	70	30	40	3
16	60	30	40	3
17	50	30	40	3
18	40	30	40	3
19	90	20	40	3
20	80	20	40	3
21	70	20	40	3
22	60	20	40	3
23	50	20	40	3
24	40	20	40	3
25	90	15	40	3
26	80	15	40	3
27	70	15	40	3
28	60	15	40	3
29	50	15	40	3
30	40	15	40	3
	Coin Op Dryers			
HIGH	90	50	40	3
MEDIUM	80	50	40	3
LOW	70	50	40	3

In case of dryers equipped with reversing drum option, the set value are the following:

- right rotation: 40 seconds
- pause: 5 seconds
- left rotation: 40 seconds

Rotation and pause programmed time can be modified (see the pertinent paragraph)
For dryer equipped with the below listed optional, the set values are the same for each one of the 30 programs:

- Heating power: level 3
- Drum speed: 40 rpm
- Fan speed: speed 2

ATTENTION!
Temperature to be used for drying must comply with the temperature written on the sticker of the linen to be dried.

ATTENTION!
Yellow stains on the dried linen may mean that the clothes were not good rinsed or the drying temperature is too much high!

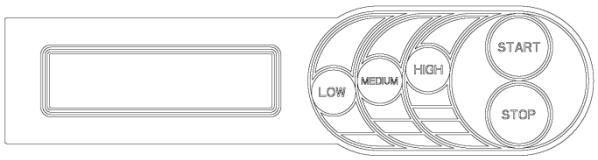
ATTENTION!
Leaving the linen in the dryer at the end of the cycle for a long time may cause wrinkle on the clothes.
If this happen very often, no wrinkle system activation is suggested.

ATTENTION!
Big difference in the dried linen thickness (may be because of seams), may caused not completed drying.

ATTENTION!
Drying of clothes with inserted button or with synthetic seams must be avoided.
The drying high temperature, in effect, could cause their melting and stain the drum.

29. COIN OP DRYER: HOW IT WORKS

In case the dryer is configured to work with a payment system (central cash, coin box, pre-paid keys, etc.), the program selection is simplified: the customer can choose one of the tree programs (LOW, MEDIUM or HIGH).



When it is pressed one of the three program keys, the program cost is displayed.
Example: pressing the key LOW, the display will show the following:

LOW TEMP
INSERT 2€

the display is showing that the minimum price to

buy the drying cycle is € 2,00.
If the payment system is allowing it, as the coins are inserted, the display shows how much is missing to complete the payment.
When the complete amount is paid, the display shows:

LOW TEMP
PRESS START

When the START key is pressed, the cycle starts.
While the drying cycle is going on, the kind of running program is displayed and the missing time is expressed in minutes and seconds.

LOW TEMP DRYING
15:45

While the drying cycle is running, the selected program can be changed just pressing the key corresponding to the new program: selection will be automatically changed without any dryer stop.

ATTENTION!
In case of program is changed while the cycle is running, if the program values are different, the credit time will be proportionally modified.

If the "ADVERT" area was configured, the advertising message will be displayed by turns with the selected program name (look the pertinent paragraph for advertising configuration).
Example:

TODAY SPECIAL OFFER …

Should the door be opened while the cycle is running, or the key PAUSE or STOP be pressed, the dryer would be in stand-by.
The credit time count down continues also during this pause.

ATTENTION!
If the pause is longer then 5 minutes, the credit is automatically lost.

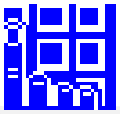
ATTENTION!
If the door is opened during the cooling step, the cycle is definitely stopped and brought to the end.
The credit is not lost, because the payment needs only to buy drying time and not cooling time.
While the cooling time is running, the selected program cannot be changed.

5 minutes before the drying cycle end, the display shows the message "INTRODUCE COINS IF YOU WANT TO BUY MORE DRYING TIME". This sentence is followed by the minimum price and the corresponding minimum time that can be brought.

INTRODUCE COINS IF YOU WANT …
4:45

30. ENTERING IN THE PROGRAM AREA
Default parameter value can be modified entering in the user menu.
While the machine is stopped, press the key MENU:

The display shows:


PASSWORD
– – – – – –

Digit the 6 figures code pressing 6 time the START/PAUSE key. The display shows a star for each digit.
Once the sequence is completed, the display shows:

PROGRAMS ▲▼

From this point it is possible to start to program.
Using the keys ▲ and ▼ scroll up/down the programming areas:

- PROGRAMS
- LANGUAGE
- DATE/TIME
- ENERGY CONSUMPTION

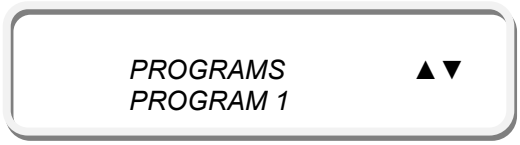
The following paragraphs are explaining how to

manage these areas.
To exit from on menu, just press STOP or MENU.

If the machine is equipped with a payment system, the access to the program area can be made keeping pressing the STOP key within 30 seconds from the machine switch on (power on).
Program menu allows to make all the necessary operation. The below table match the standard version keys with the coin op version keys:

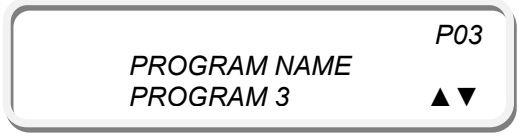
Standard version	Coin op version
START	START
STOP	STOP
SINISTRA: ◄	Not available
DESTRA: ►	Not available
GIU': ▼	LOW
SU: ▲	HIGH
ENTER: ◄┘	MEDIUM
MENU	Not available

31. PROGRAMS MODIFICATION
To enter in the program area, please follow the instruction given in the previous paragraph.
When the display shows "PROGRAMS ▲▼", press ENTER ◄┘.
The display shows:



Scroll down the programs with the key ▲ and ▼ until it is displayed the name of the program that you want to modify.
When the wished program is displayed (in our example the number 3), press ENTER ◄┘. In this way it is possible to enter in the program n. 3 parameters modification. The parameters list can be scrolled up and down using the keys ▲ and ▼.

The display shows:

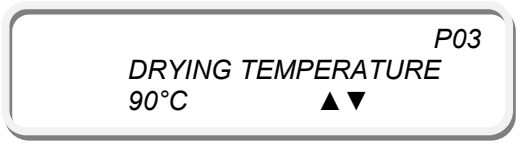


To pass to the following parameter press ▼.
On the contrary, to modify the program name, press ENTER ◄┘. A cursor will flash on the letter that can be changed.
Scroll up/down the available letters list using the keys ▼ and ▲.
Move the cursor on the right and on the left using the keys ◄ and ►.
When the name is completed, press ENTER to confirm.
In case of Coin Op dryer, follow the instruction explained in the paragraph referring to "ADVERT" area.

To pass to the following parameter press ▼.
The display shows:

To pass to the following parameter press ▼.
On the contrary, to modify the drying cycle length, press ENTER ◄┘. The time starts to flash. Increase or decrease the time using the keys ▼ and ▲ (from 1 to 99 minutes).
When the wished time is displayed, press the ENTER key to confirm.

To pass to the following parameter press ▼.
The display shows:



To pass to the following parameter press ▼.
On the contrary, to modify the drying temperature, press ENTER ◄┘. The temperature starts to flash. Using the keys ▼ and ▲ the temperature value can be changed (from 0°C to 90°C).
When the wished temperature is displayed, press the ENTER key to confirm.

To pass to the following parameter press ▼.
The display shows:

To pass to the following parameter press ▼.
On the contrary, to modify the cooling length, press ENTER ◄┘. The time starts to flash. Using the keys ▼ and ▲ the cooling length can be changed (from 1 to 30 minutes).
When the wished length is displayed, press the ENTER key to confirm.

To pass to the following parameter press ▼.
The display shows:

To pass to the following parameter press ▼.
On the contrary, to modify the cooling end temperature press ENTER ◄┘. The temperature starts to flash. Using the keys ▼ and ▲ the cooling length can be changed (from 0°C to 90°C).
When the wished temperature is displayed, press the ENTER key to confirm.

To pass to the following parameter press ▼.
Only if the machine is equipped with the Reversing Drum option, the display shows:

To pass to the following parameter press ▼.
On the contrary, to decide about the drum reversing during the drying cycle, press ENTER◄┘. The label "WITH" starts to flash. Using the keys ▼ and ▲ choose the label "WITHOUT".
If the drying cycle is WITH drum reversing, then when the program P03 is run, the drum turn before in one direction (right) and than the other one (left).
If the drying cycle is WITHOUT drum reversing, then when the program P03 is run, then the drum turn always in the same direction (right), without any pause and following reversing.
When the parameter is fixed, press ENTER to confirm.

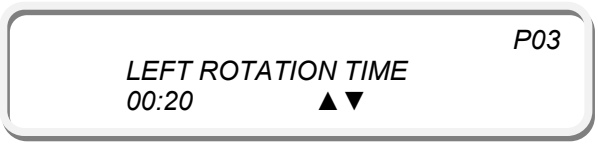
To pass to the following parameter press ▼.
Only if the machine is equipped with the Reversing Drum option, the display shows:

To pass to the following parameter press ▼.
On the contrary, if the drum right rotation time need to be changed, press ENTER ◄┘. The time starts to flash. Using the keys ▼ and ▲ it is possible to increase/decrease the rotation time (from 1 second to 5 minutes).
When the parameter is fixed, press ENTER to confirm.

To pass to the following parameter press ▼.
Only if the machine is equipped with the Reversing Drum option, the display shows:

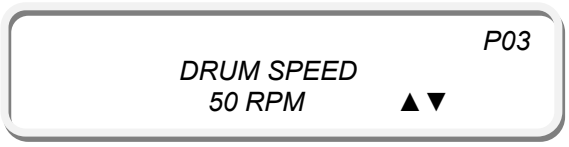
To pass to the following parameter press ▼.
On the contrary, to modify the rotation pause length press the key ENTER ◄┘. The time starts to flash. Using the keys ▼ and ▲ it is possible to increase/decrease the rotation time (from 1 second to 5 minutes).
When the parameter is fixed, press ENTER to confirm.

To pass to the following parameter press ▼.
Only if the machine is equipped with the Reversing Drum option, the display shows:



To pass to the following parameter press ▼.
On the contrary, to modify the drum left rotation, press the key ENTER ◄┘. The time starts to flash. Using the keys ▼ and ▲ it is possible to increase/decrease the rotation time (from 1 second to 5 minutes).
When the parameter is fixed, press ENTER to confirm.

To pass to the following parameter press ▼.
Only if the machine is equipped with Drum Speed Control, the display shows:



To pass to the following parameter press ▼.
On the contrary, to modify the drum speed rotation press the key ENTER ◄┘. The drum speed starts to flash. Using the keys ▼ and ▲ it is possible to increase/decrease the drum rotation speed (from 20 rpm to 80 rpm).
When the parameter is fixed, press ENTER to confirm.

To pass to the following parameter press ▼.

Only if the machine is equipped with Fan Speed Control, the display shows:

To pass to the following parameter press ▼.
On the contrary, to modify the fan speed rotation press the key ENTER ◄┘. The fan speed starts to flash. Using the keys ▼ and ▲ it is possible to increase/decrease the fan rotation speed (from level 1 to level 4).
When the parameter is fixed, press ENTER to confirm.

To pass to the following parameter press ▼.
Only for dryers equipped with Power Partial Option, the display shows:

To pass to the following parameter press ▼.
On the contrary, to modify the power level press ENTER ◄┘. The Power level starts to flash. Using the keys ▼ and ▲ it is possible to increase/decrease the power level (from level 1 to level 3).
When the parameter is fixed, press ENTER to confirm.

To pass to the following parameter press ▼.
Only if the machine was set up with an initial cooling (step befor the drying cycle), the display shows:

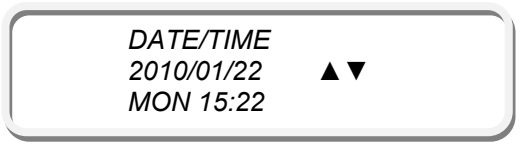
To pass to the following parameter press ▼.
On the contrary, to modify the initial cooling length press ENTER ◄┘. The time starts to flash. Using the keys ▼ and ▲ it is possible to increase/decrease the time (from 1 second to 5 minutes).
When the parameter is fixed, press ENTER to confirm.

During the parameter program, the menu can be exited at any time pressing STOP or MENU.

32. LANGUAGE SELECTION
To enter in the program area and change the language, follow the instructions given in the pertinent paragraph.
When the display shows:

Press ENTER ◄┘.
The language (ITALIAN, in our example) starts to flash. Scroll down/up the languages list using the key ▼ and ▲. When the wished language is displayed press ENTER to confirm.
Exit the menu using the keys STOP or MENU.

33. DATE/TIME MODIFICATION
To enter in the program area and change the date and the time, follow the instructions given in the pertinent paragraph.
When the display shows:



Press ENTER ◄┘.
The year (in our example 2010) starts to flash.
Using the keys ▼ and ▲ it is possible to modify the value of each data.
Using the keys ◄ and ► it is possible to modify the value of each data.
When all data/time parameters are fixed, press ENTER to confirm.
Exit the menu using the keys STOP or MENU.

34. ENERGY CONSUMPTION
To enter in the program area, follow the instructions given in the pertinent paragraph.
Please note, the data given in this area are correct only if the installer correctly set the machines at the test moment.
When the display shows:

Press ENTER ◄┘ to display the dryer energy consumption.
The display shows:

ENERGY CONSUM.
TOTAL ENERGY ▲▼
110 kWh

The display shows how much energy has been used starting from the installation day.
Press ▼. The display shows:

ENERGY CONSUM.
PARTIAL ENERGY ▲▼
55 kWh

The display shows how much energy has been used starting from the last hour counter reset.
Press ▼. The display shows:

ENERGY CONSUM.
COUNTER RESET ▲▼

Press ENTER ◄┘ to reset the counter. A flashing "NO" is displayed: press ▼ or ▲ to change it in "YES". Press ENTER ◄┘ to reset.
Exit from program area using the key STOP or MENU.

35. NO WRINKLE

To enter in the program area to activate or deactivate the no-wrinkle function, follow the instructions given in the pertinent paragraph.
When the display shows:

NO WRINKLE ▲▼

Press ENTER ◄┘ to enter in the NO WRINKLE menu.
The parameters which can be modified are the following:

- NO WRINKLE: possible value are:
  - YES: no-wrinkle cycle will start after the cooling end, if the door is not open and respecting the parameters fixed below.
  - NO: no-wrinkle cycle will not start after the cooling end, even if the door is not open.
- END CYCLE PAUSE: it is the waiting time after the end of the cooling before the no wrinkle cycle start; it is expressed in seconds.
- FORWARD: it is the right rotation time in seconds. Value valid only for the no wrinkle cycle.
- PAUSE: how long the drum stopped. Time expressed in seconds. Value valid only for the no wrinkle cycle.
- BACK: it is the left rotation time in seconds. Value valid only for the no wrinkle cycle.
- MAX TIME CYCLE: no wrinkle lenght before the dryer definitely stops.

36. INITIAL COOLING

To enter in the program area to activate or deactivate the initial cooling, follow the instructions given in the pertinent paragraph.
When the display shows:

INTIAL COOLING ▲▼

Press ENTER ◄┘ to go into the parameter menu and ▼ or ▲ to select YES or NO.
Press ENTER ◄┘ to confirm the selected option.
If it is selected YES, then an initial cooling time can be set in each program: it is a beginning cycle, which start together with the program start before the normal heating cycle.

37. PAYMENT SYSTEM

If the machine is equipped with a payment system, there are some special parameter which are not available in the standard version.
These parameters are the ones into the ADVERT menu or into the COIN BOX menu, plus two additional parameters which can be only read:

- TOTAL CREDIT: total amount of the credit, starting from the installation date.
- DAILY CREDIT: total amount of credit of the day (starting from 00:00).

38. ADVERT

The "ADVERT" menu is available only in case of Coin – Op Dryers.
To enter in the program area, follow the instructions given in the pertinent paragraph.
When the display shows:

ADVERT ▲▼

Press the key MEDIUM to display the advertising text, which will run on the display while the dryer is working.

The display shows a cursor to indicate where it is possible to write:

If the line with the cursor is completely empty, there will be no messages appearing while the dryer is running.
To compile the message, use the keys following the here below explain logic:

- START pressed for less then 1 second: the cursor moves through the text.
- START pressed for 2 seconds: add one figure at the left of the selected position.
- START pressed for 5 seconds: erase the selected letter.
- HIGH, LOW to move among the possible value for the selected figure.

The available characters are 29.

39. COIN BOX MENU

The “COIN BOX MENU’” is present only in case of Coin Op dryers.
To enter in the program area, follow the instructions given in the pertinent paragraph.
When the display shows:

Press MEDIUM to set the coin box.
Using the LOW and HIGH keys, it is possible to scroll the menu parameter.
When the wished parameter is displayed, press MEDIUM to confirm and, while it is flashing, use the LOW and HIGH keys to modify its value.
Once the wished value is displayed, press again MEDIUM to confirm. Here below the parameter list of this menu:

- COIN: it identifies the currency that will be displayed.
- TOKEN 1: it identifies the value (expressed in currency) of each impulse given to the electronic board input (terminal identified by TOKEN 1).
- TOKEN 2: it identifies the value (expressed in currency) of each impulse given to the electronic board input (terminal identified by TOKEN 2).
- DECIMALS: number of decimals shown when the price is displayed:
    - XX: no decimal
    - XX,X: one decimal
    - XX,XX: two decimals
- AUTOMATIC START:
    - If “YES”: when the payement has been completed, the cycle automatically start.
    - If “NO”: when the payment is completed, the cycle start only if START is pressed.

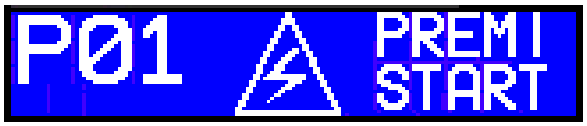
To exit the menu or to go back to the previous program level, just press STOP one or more time.

40. EMERGENCY STOP BUTTON

In case a quick machine stop is needed, press the emergency stop button (if present).
When the emergency stop button is pressed, the drum stops and the dryer is turned off.
When the emergency ends, set again the emergency stop button, turning it in the direction written on it.

41. BLACK OUT

In case of black out, one or more clothes may stay in the drum and they could risk to catch fire.
In this case, open the door, unload the dryer and leave it opened.
When the electricity will be restored, the display will show:



The interrupted program number is displayed (the number 1, in our example), pressing Start it is possible to start it again.
Load the machine again and close the door: the cycle will be started from the point where it was interrupted.

42. WHAT MUST BE DONE IN CASE OF GAS SMELL

In case the room where the dryer is installed smell of gas:
stop immediately the program;
open immediately all the door and windows;
close immediately the valve ore the gas gate valve before the machine;
do not light on the room illumination, matches or lighter;
do not smoke;
Call the installer to check the gas leak.

43. DISPLAYED WARNING

The microprocessor reports both in case of a no-correct dryer working and in case of a simple highlight of a status.
Here below a complete list of the possible displayed alarms.
In case one of the following alarms should be

displayed, please contact an authorized service centre to solve the possible problem.
Each one of the following alarms is also acoustically signalled by a buzzer.
In case of a dual timer dryer, there is no possibility of warning: in case the machine should stop, ask directly to the authorized service centre.

NO FLAME

In case of a gas heated dryer, the following alarm could be displayed:

NO FLAME
PRESS ENTER

When this alarm is displayed, the dryer continues to work, but the heating system is stopped waiting for a reset. To start again the heating, press the key ENTER ◄┘.
Control if the gas tap is open. In case the alarm is shown often, ask for a check to the service centre.

ATTENTION!

In case of coin op dryer, the above message is replaced by: “NO FLAME PRESS START”

OVERHEATING

In case the temperature inside the drum is 30°C higher then the set point temperature, at the display is flashing:

OVERHEATING

In case the heating is stopped until the temperature is not going below the safety value.

ATTENTION!

In this case the suction continues to work to cool the linen.
In case this alarm is repeating very often, ask for a check to an authorized service centre.

MAINTENANCE NEEDED

In case the temperature inside the drum is 30°C higher than the set point temperature, the display shows the following flashing alarm:

MAINTENANCE NEEDED

Pressing one key, the machine start again without any other signal. Anyway it is necessary to call the authorised service centre for the ordinary maintenance.

DOOR OPEN

If the door is opened during the drying cycle, the machine stops. The display shows:

P01 DOOR OPEN

The machine is in pause: close the door and start again the cycle pressing START.

FILTER DOOR OPEN

If the filter door is open, the dryer stops. The display shows:

FILTER DOOR OPEN

The machine is in pause: close the filter door and start again the cycle pressing START.

FAN THERMAL

If the fan motor overheats, the dryer stop and the display shows:

FAN THERMAL ALARM

Turn off the dryer and ask for the authorised service centre intervention.

DRUM MOTOR THERMAL

If the drum motor overheats, the dryer stops and the display shows:

DRUM MOTOR THERMAL ALARM

Turn off the dryer and ask for the authorised service centre intervention.

TEMPERATURE PROBE FAILURE

If the temperature probe is damaged, the display shows:

TEMPERATURE PROBE FAILURE

Turn off the dryer and ask for the authorised service centre intervention.

AIR DEPRESSOR TRANSDUCER CLOSED

If the air depressor transducer is damaged, the display shows:

AIR DEPRESSOR TRANSDUCER CLOSED

Ask for the authorised service centre intervention.

AIR EXHAUST

If there is a problem with the humid air exhaust, the display shows:

AIR EXHAUST ALARM

Ask for the authorised service centre intervention.

FILTER CLEANING CHECK

If the filter is dirty, the display shows:

CHECK FILTER CLEANING

Turn off the machine, open the filter door and clean the filter.

COIN BLOCKED

If the machine is configured to work with a coin box, the display shows:

COIN BLOCKED

It means that the coin is blocked inside the coin box for more than 5 seconds.
Check the credit and ask for the authorised service centre intervention.

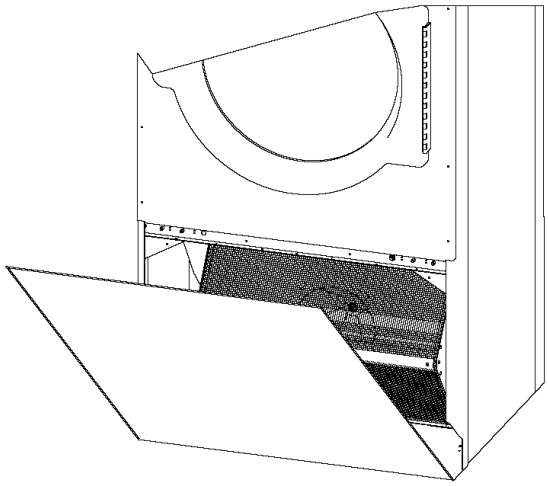
This alarm appears also if the coin blocked while a cycle is running, i.e. when extra time is bought. In this case the program is going on and completed, even if the alarm stays displayed.
If the coin box should suddenly make free, the alarm would be automatically reset.

44. DRYER MAINTENANCE

Each ordinary and extraordinary maintenance intervention must be operated by qualified personnel.
All the dryer supply connection must be cut off before any maintenance intervention on the machine.
Here below the ordinary and extraordinary maintenance operations, which need to be done on the machine.

EACH CYCLE

At the end of each drying cycle, clean the filter from the fluff.



To clean the filter, open the door or pull the drawer (for some models), in order to access to the filter room.
In case of model with filter door, the filter must not be removed.
For model with filter drawer, empty the filter bag paying attention to not damage the net.
In both cases, the fluff must be removed from the filter using the hands, do not use sharpened object

ATTENTION!

Never use the dryer without the fluff filter. If the filter is damaged, replace it immediately.

EACH WEEK

Check the drum cleaning condition: there must no be deposit on the drum. Be sure that there are not stains due to melted nylon seams, button and

other.

ATTENTION!

To clean the drum, do not use a high pressure or a water continuously cleaner.
The drum must be cleaned with a dried and soft cloth.

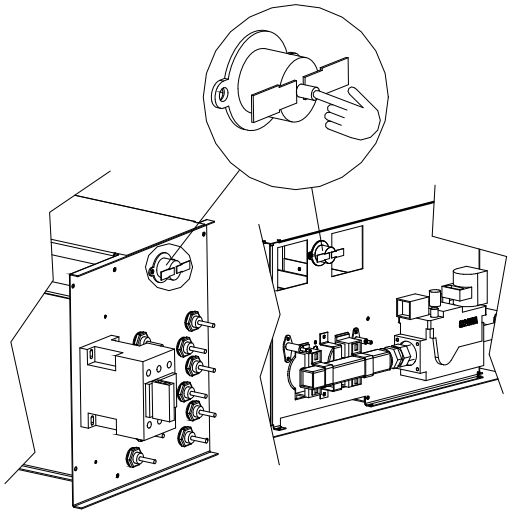
EACH YEAR

An authorized service centre must be contacted to:

- clean the burner or the heating element from fluff and other
- clean the dryer inside
- clean the suction fan
- control the pneumatic tightness
- control the gas tightness

WHEN NECESSARY

In case the temperature inside the burner reaches too much higher values, a safety thermostatic paste stops the heating system: the drum continues to rotate, but the heating system stay deactivated.
The thermostatic paste need to be manually rearmed, in this case it is necessary to turn off the dryer, cut all the energy supply, open the above frontal door and press the brown coloured push button near the thermostatic paste.



If the problem should repeat, switch off the dryer and call the authorised service centre.

ATTENTION!

In case of tilting dryers, before to start any maintenance service, control that the air system is completely discharged and no pneumatic movement can be activated, even when if there is no electricity supply.
In case of maintenance with mechanism, which are not in the rest position, be sure to mechanically and safely block them

45. DRYING PROBLEMS

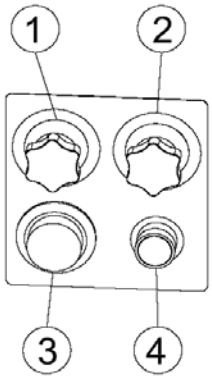
In case of not satisfying drying results, please check the following table to find a solution to the most usual problems.

PROBLEM	SOLUTION
The linen presents yellow stains.	Check if the linen is correctly rinsed and all the soap is washed away. The PH value must be included between 5 and 6.
The linen is yellowed.	Check that the drying temperature is complying with the data on the label.
At the end of the cycle linen is still wet.	Check the selected temperature, it could be too much low. Check the air suction system, it could be blocked and its efficiency limited. Check the exhaust system: it could be to much strong avoiding the air to pass through the linen.
At the end of the cycle linen is hardened	Check the cycle temperature, especially in case of linen fabrics. If temperature is too much high, the fabrics is going to harden.
At the end of the cycle linen is felted	Check clothes label and their conformity with the dryer use, especially in case of wool or mixed wool fabrics. In this case avoid a complete drying.

PROBLEM	SOLUTION
The drum is scratched. Some clothes are damaged, torn	Metallic objects like buckle, hooks, fastenings must be covered with a cloth before to dry, so the drum is protected by scratches or collisions, which could also damage the linen.

46. DUAL TIMER DRYER: USE

Until now it was treated only the case of a microprocessor controlled dryer.
It is also available a simplified dryer model, which is controlled by electromechanical commands.
For this dryer the control is the following:



Marks 1 and 2 indicate the heating and the cooling timers.
Marks nr 3 indicates the thermostat and the marks nr 4 the START button.
In this picture is not preset the RESET button, which equips only gas heated dryers.
Load the machine and close the door; all the instructions given in the previous paragraphs must be respected.
Fix the heating and cooling times using the two timers; fix the drying temperature using the thermostat.
Press the START button.
The START button lights on and the cycle starts and runs until its end.

In case the drum door or the filter door are opened, the cycle stops: to start it again press START.

If the START button does not light on, and the cycle does not start, when the button is pressed ask for the intervention of an authorised service centre.

Only in case of gas heated dryers: if the burner does not start, the red RESET button lights on to signal the flame control block.

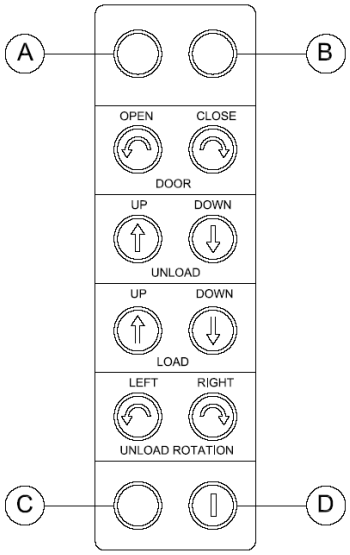
In this case the machine continues to work, but the heating is deactivated. To unlock the flame control, press the RESET button until it lights off.
In case the RESET button light on often, ask for a dryer check to a authorized service centre.

47. TILTING DRYER: USE

In case the dryer is equipped with a tilting system, to the previous paragraphs indication, the following remarks need to be added to control the right and left drum rotation.
In this case the controls can be given using a remote keyboard.

ATTENTION!

When the machine is in the tilting step, or the pneumatic door is opening, the user must not stay close to the machine and control the dryer using the remote keyboard.



Before to start the tilting, always wait for the end of the running cycle.
To activated or deactivate the keyboard use the key – switch (D).
When the keyboard is on, the microprocessor is off.
If the keyboard is on, the green light is also on (A).

LOADING (for machine equipped with two way tilting)

Switch on the keyboard using the key. To open the door press at the same time the activation key (below at left) and the “DOOR OPEN” key.
When the door opening is complete, make the dryer bend to the back pressing at the same time the activation key (C) and the “LOAD UP” key.
When the loading is completed, bring the dryer in the original position pressing at the same time the

activation key (C) and the “LOAD DOWN” key.
Close the door pressing at the same time the activation key (C) and the “CLOSE DOOR” key.
Switch off the keyboard using the key (D).

UNLOADING
Switch on the keyboard using the key (D).
To open the door press at the same time the activation key (C) and the “DOOR OPEN” key.
When the door opening is complete, make the dryer bend forward pressing at the same time the activation key (C) and the “UNLOAD DOWN” key.
When the machine is in the unloading position, the linen exit can be helped by the slow alternate rotation of the drum (right and left); to make the drum rotate, press at the same time the activation key (C) and the “UNLOAD ROTATION” key (RIGHT and/or LEFT).
When the unloading operation is ended, bring the dryer to the orginal position pressing at the same time the activation key (below – left) and the “UNLOAD UP” key.
Close the door pressing at the same time the activation key (C) and the “CLOSE DOOR” key.
Switch off the keyboard using the key (D).

48. SAFETY DEVICE CONTROL

After the machine is turned on, before to start the drying cycle, it is necessary to control the safety device correct working.
The user should always stick to the following procedure:

ACTION SEQUENCE	REACTION
Start a drying cycle and open the door…	… the dryer should stop and stay in pause.
Start a drying cycle and open the filter door…	… the dryer should stop and stay in pause.
Press (if present) the emergency stop button …	… the drum should stops and the dryer should turn off.

ATTENTION!
After to turn on the machine and before to start to work, the safety device correct working must always be controlled.

49. SCRAPPING

When the machine life cycle arrives to the end, please proceed with the machine scrapping following the country rules, keeping separate the metallic, the plastic, the glass, the electric/electronic parts.

The above symbol on the appliance or on the package means that at the end of its life cycle this product must be collected separately from other waste material.
For this appliance waste separation, follow the rules in force in the Country where the machine is installed.
A correct waste separation avoid dangerous impact on the environment and make easier the material recycling.
Unlawful disposal may caused application of administrative sanction, following the rules in force in the country where the dryer is installed.

ATTENTION!
In case the machine should not be more used before the dryer disposal, make the door lock out of service, to avoid that somebody close himself inside risking his life.

50. WARRANTY CONDITION

For the warranty condition, check the manufacturer price list.

ATTENTION!
To benefit of the manufacturer warranty condition, the manual instructions must be carefully followed. In particolar:

- Work always respecting the dryer use limits;
- Maintenance must be always correctly operated;
- The dryer must be used only by well trained personnel;
- Use only original spare parts.